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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,416	01/30/2002	Masaki Misawa	218866US2	4745

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EXAMINER

CHURCH, CRAIG E

ART UNIT PAPER NUMBER

2882

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/058,416

Applicant(s)

Misawa

Examiner

Craig E. Church

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08/06/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the multiple sources outside the detector circle must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. 112 first paragraph as failing to provide an enabling disclosure. While lines 7-16 of page 8 of the specification explicitly refer to "sources" meaning plural, there is no teaching of how plural sources positioned outside the circle of detectors can project x-ray beams onto the examined object since the beams would have to pass through the detectors. Figure 2 shows a single beam passing through a gap in the detector circle, but the arrangement for plural sources is not revealed.

Claims 7-13 are rejected under 35 U.S.C. 112, first paragraph, for the reasons set forth in the objection to the specification.

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 7 and 9-13 are rejected under 35 U.S.C. 103 as being unpatentable over Street et al (5117114). Figures 11 and 12 of Street show detector modules 223,225 comprising strip shaped detector arrays configured as a polygon around an imaging region of a CT scanner opposite an x-ray source (lines 35-63 of column 9). Lines 35-52 of column 4 explain that the pixels may be fabricated by photolithography. The claims are rejected to the extent they are supported by the original disclosure.

Claim 8 is rejected under 35 U.S.C. 103 as being unpatentable over Street as applied to claim 7 above, and further in view of Morton (5693947). Lines 43-46 of column 10 of Morton teach the use of CdTe as useful for detecting x rays, and It would have been obvious therefor to one of ordinary skill in the art at the time the invention was made to employ CdTe in the Street detectors.

Claims 7 and 9-13 are rejected under 35 U.S.C. 103 as being unpatentable over Takahashi et al (5164973). Figures 2 and 6 of Takahashi show detector modules b configured as a contiguous polygon around an imaging region of a CT scanner opposite an x-ray source. Official notice is taken that integrated circuits (such as Takahashi's semiconductor arrays) are commonly made via photolithography, and it would have been obvious to employ these in Takahashi's modules. The claims are rejected to the extent they are supported by the original disclosure.

Claim 8 is rejected under 35 U.S.C. 103 as being unpatentable over Takahashi as applied to claim 7 above, and further in view of Morton. Lines 43-46 of column 10 of Morton teach the use of CdTe as useful for detecting x rays, and It would have been obvious therefor to one of ordinary skill in the art at the time the invention was made to employ CdTe in the Takahashi detectors.

Claims 7 and 9-13 are rejected under 35 U.S.C. 103 as being unpatentable over Shaw et al (4338521). Shaw teaches straight detector modules 46 arranged as a contiguous polygon (approximating a circle) around an imaging region of a CT scanner opposite an x-ray source. Each module comprises a PC board 76 and integrated circuit 96. Official notice is taken that integrated circuits are commonly made via photolithography, and it would have been obvious to employ these in Shaw's modules. The claims are rejected to the extent they are supported by the original disclosure.

Claim 8 is rejected under 35 U.S.C. 103 as being unpatentable over Shaw as applied to claim 7 above, and further in view of Morton. Lines 43-46 of column 10 of Morton teach the use of CdTe as useful for detecting x rays, and It would have been obvious therefor to one of ordinary skill in the art at the time the invention was made to employ CdTe in the Shaw detectors.

Claims 7 and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franke (4384359) in view of Street. Franke teaches a CT scanner comprising detector modules 6a, 7a, 8a arranged on a detector circle and plural sources 6, 7, 8 arranged outside the detector circle. The Franke modules are disclosed as almost planar but not

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quite, and it would have been obvious to make them planar as taught by Street for ease of fabrication.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Franke (4384359) and Street. as above in view of Morton. Lines 43-46 of column 10 of Morton teach the use of CdTe as useful for detecting x rays, and It would have been obvious therefor to one of ordinary skill in the art at the time the invention was made to employ CdTe in the Franke detectors.

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Examiner Church at telephone number (571) 272-2488.



Craig E. Church  
Senior Examiner  
Art Unit 2882